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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,863	02/19/2004	Soon Hyung Hong	2236.0010000/JUK/SMW	1952
26111 7590 12/08/2009 STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005				
EXAMINER				
LAZORCIC, JASON L				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
12/08/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/780,863

**Applicant(s)**

HONG ET AL.

**Examiner**

JASON L. LAZORCIK

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2, 4, 6-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 6-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**DETAILED ACTION**

**Status of the claims**

Applicants reply dated August 11, 2009 amends claim 11, amends the dependencies of claims 2, 4, and 6-8, and cancels claims 1 and 10.

In view of the instant reply, claims 2, 4, 6-9, and 11 are pending for prosecution on the merits with claim 11 being of independent form. Claims 1, 3, 5, and 10 stand as being cancelled by Applicant and no claims have been withdrawn from consideration.

***Claim Objections***

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Specifically, Claim 2 recites the limitation wherein the dispersion medium is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride. It would appear evident to the examiner that the dispersion medium is already limited to the named compounds in step (d) of independent claim 11 (see claim 11, lines 11-13). For at least this reason, it is the Examiners assessment that the noted Claim 2 fails to further limit the subject matter of parent claim 11.

For the sake of clarifying the metes and bounds of the recited invention, Applicant is respectfully requested to amend step (b) of claim 11 (e.g. claim 11, line 4)

to recite the limitations as presently set forth in dependent claim 2 and to thereby cancel or amend said dependent claim 2. Applicant is further advised that such an amendment may optionally cancel the limitation in claim 11, lines 10-13, namely that "the dispersion medium is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride", without affecting the scope of the recited invention.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 2, 4, 6-9, and 11 are rejected on the ground of nonstatutory double patenting over claims 1-7 of U. S. Patent No. US 7,217,311.**

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Independent Claim 1 of the '311 patent is broadest in scope. Said claim 1 recites every limitation of currently pending claim 11 in the instant Application including, *inter alia*, the recited steps (a) through (e). The patent claim 1 does not recite certain limitations of the currently pending application claim 11 such as the sonication time as recited in claim 11, lines 9-10 or that the dispersion of step (c) is limited to "consist" of the named components as recited in claim 11, lines 11-13. For this reason, the later filed patent '311 claim 1 is broader in scope than pending claim 11 and therefore claim 11 is construed to read directly on the claim 1 of the '311 issued patent.

With respect to the instant Application claim 2, see claim 2 of the '311 patent

With respect to the instant Application claim 4, see claim 3 of the '311 patent

With respect to the instant Application claim 6, see claim 4 of the '311 patent

With respect to the instant Application claim 7, see claim 5 of the '311 patent

With respect to the instant Application claim 7, see claim 6 of the '311 patent

With respect to the instant Application claim 9, see claim 7 of the '311 patent

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Allowable Subject Matter***

Claims 2, 4, 6-9 and 11 contain allowable subject matter.

The following is an examiner's statement of reasons for allowance:

The reasons for indication of allowable subject matter have been previously made of record on pages 13 to 14 of the Official Action dated May 12, 2009. Specifically, it was noted that both Hwang and Smalley require inclusion of a surfactant compound in the dispersion medium when preparing a carbon nanotube dispersion. As further noted by Applicant, although Hwang teaches a very closely related method for manufacturing a ceramic/nanotube composite powder, the Hwang method does not teach or suggest extended sonication periods between 2 and 10 hours in duration.

It follows that the prior art does not teach or suggest the recited method for fabricating a nanocomposite powder which includes the step of sonicating for a duration between 2 to 10 hours a dispersion which consists of (1) carbon nanotubes, (2) a water soluble salt capable of being formed into a ceramic matrix post calcination, and (3) a dispersion medium which is selected from the group consisting of water, ethanol, nitric acid solution, toluene N,N-dimethylformamide, dichlorocarbene, and thionyl chloride.

Claims 2, 4, and 6-9 all depend from independent claim which has been deemed patentable over the prior art of record for reasons noted above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason L Lazorcik/  
Primary Examiner, Art Unit 1791